Amendments to the Specification:

Please replace paragraph [0032] with the following amended paragraph:

[0032] U.S. Patent No. 3,342,891 describes fractionating a stream of C4 and C5 alkadienes into two streams, where one stream is reduced in vinyl acetylenes and the second stream is enriched in vinyl acetylenes. DMSO was used to separate the vinylacetylene from the enriched stream. The DMSO that contains the vinylacetylene was stripped with nitrogen to concentrate ~~conentrate~~ the vinylacetylene, which was subsequently hydrogenated in the gas phase. Unconverted vinyl acetylene in the effluent is recycled back to the feed of the fractionation column.

Please replace paragraph [0038] with the following Amended paragraph:

[0038] U.S. Patent No. 6,255,548 and U.S. Patent No. 6,281,160 describe a process for hydrogenation and a process to manufacture a catalyst respectively, whereby a Group VIII metal and metal M, selected from germanium, tin, lead, rhenium, gallium, indium, gold, silver, and thallium are deposited on a support for the purpose of the hydrogenation of acetylenic compounds or diolefins. The deposition of the metal M is accomplished by solubilizing an organometallic ~~organometalic~~ compound of M that is soluble in water. An example is presented for a palladium/tin catalyst formed using tributyltin acetate. The resulting catalyst is used to convert isoprene in heptane to n-methylbutene with 98% selectivity.